

**REMARKS**

The Examiner is thanked for the performance of a thorough search.

Claims 1 through 28 were pending in the present application when last examined and were rejected. Claims 1, 20 and 28 are being amended and no new matter is being added. Claim 24 is cancelled without prejudice. Claims 1 – 23 and 25 - 28 remain pending in the present application.

**Objections to the Specification**

In item 2, on page 2, the Office Action objected to the first paragraph because information regarding related applications has to be completed (i.e. application serial number at page 1). Applicant has amended the specification to overcome the objection.

**Rejection under 35 U.S.C. § 101**

In item 3, on page 2, the Office Action rejected claims 27 and 28 under 35 U.S.C. § 101 because the claims are not useful in technical art therefore they are non statutory and also they have non-function description material and function relationship. This differs, for instance from a computer implemented method.

Applicant respectfully traverses.

The embodiments recited by claims 27 and 28 are useful in the technical art at least for the following reasons recited in applicant's specification:

Specific embodiments provide spatial intelligence aware infrastructure in which spatial entities and attributes may be used in conjunction with data warehousing and data mining techniques to provide insight into business, technical, and governmental processes. Specific embodiments according to the present invention bring spatial data into the mainstream business world, the data warehousing environment, and decision-support systems environments. Data warehousing applications in accordance with specific embodiments of the present invention can transform data into useful knowledge and intelligence. [emphasis added] (Specification, page 6, lines 23 – 30).

Because claims 27 and 28 recite embodiments that provide a spatial intelligence aware infrastructure, which in conjunction with data warehousing and data mining techniques, can enable can transforming data into useful knowledge and intelligence, these claims recite statutory subject matter in accordance with 35 U.S.C. § 101.

Applicant respectfully submits that the rejection is improper in view of the usefulness of the claimed embodiments in the technological arts.

**Rejection under 35 U.S.C. § 112, second paragraph**

In item 4, on page 2, the Office Action rejected claims 1, 20 and 28 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant disagrees and would traverse, but has elected instead to amend claims 1, 20 and 28, rendering the rejection moot.

**Rejections Under 35 U.S.C. § 102(b) Based on Pouschine**

In items 5 and 6 that begin on page 3, the Office Action rejected claim 23 under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent Number 5,918,232 to Pouschine et al (hereinafter “Pouschine”). Applicant respectfully traverses.

The Office Action asserts in item 1 that, regarding claim 23, Pouschine discloses:

An apparatus, comprising: means for generating one or more virtual schemas (104, fig. 6 and corresponding text, Pouschine, and 104 is a schemas contains the physical table configuration and relationship between tables of data therefore it is virtual schemas) including at least a portion of data input from a source (col. 14, lines 20-23, Pouschine); means for generating mapping rules controlling data movement into a data warehouse (16, fig. 6 and corresponding text, Pouschine); means for holding the virtual schemas and mapping rules (col. 14, lines 25-33, Pouschine); means for generating one or more analysis functions based upon the virtual schemas and data input (col. 14, lines 20 – 63, Pouschine).

Applicants respectfully disagree.

Claim 23 recites:

23. An apparatus, comprising:  
means for generating one or more virtual schemas including at least a portion of

data input from a source;  
means for generating mapping rules controlling data movement into a data  
warehouse;  
means for holding the virtual schemas and mapping rules;  
means for generating one or more analysis functions based upon the virtual  
schemas and data input.

Even assuming arguendo that each and every Office Action assertion is entirely correct (which cannot be so), the Office Action's arguments fail to consider recited claim limitations. For example, instant claim 23 recites "means for generating one or more virtual schemas including at least a portion of data input from a source." Not only does the Office Action fail to consider such claim 23 element, and not only does Pouschine fail to teach or suggest such element, but Pouschine further teaches away from the recited element.

Pouschine discloses any 1-to-1 relationship between data and a storage structure in which the data is stored. Pouschine never claims, however, to have a virtual schema. Rather Pouschine simply refers to their data structure as a schema. Thus, for at least this reason, Pouschine fails to teach, disclose, suggest or otherwise render obvious the recited "means for generating one or more virtual schemas including at least a portion of data input from a source." Therefore, Pouschine does not teach, suggest or disclose the claimed embodiments for at least these reasons.

Because Pouschine's system necessarily REQUIRES a physical schema, using a virtual schema in place of Pouschine's physical schema would render Pouschine inoperable or unsatisfactory for its intended purpose or change Pouschine's principle of operation (see MPEP § 2143.01). Further, the Office Action's argument that because Pouschine has a physical schema, they were also in possession of a virtual schema is an exercise in impermissible hindsight. In fact, because Pouschine never discloses a virtual schema, instead shows that the invention as recited is patentable over the prior art at least for reciting such virtual schemas.

Accordingly, Pouschine fails to teach, suggest or otherwise render obvious recited claim limitations and the Office Action's argument to the contrary requires impermissible hindsight. Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Pouschine from further consideration as a reference in the instant case.

**Rejections Under 35 U.S.C. § 103(a)**

**LI**

In item 8 that begins on page 4, the Office Action rejected claims 1- 4, 13 - 22, 25 and 26 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,918,232 to Pouschine et al. (Pouschine) in view of U.S. Patent Publication No. 20020198891 to Li et al. (Li). The Office Action states that:

Regarding claim 1, Pouschine discloses: A method, comprising:  
receiving a first schema database (106, fig. 6 and corresponding text, Pouschine);  
forming a virtual schema including at least a portion of a dataset included within  
the first database (col. 15, lines 21-28, Pouschine); receiving a first input  
indicating a criteria (col. 14, lines 20-63, Pouschine); displaying one or more  
indicators associated with the one or more groupings on an n-dimensional  
presentation (col. 14, lines 1-19, Pouschine).

The Office Action admits that:

Pouschine didn't disclose: aggregating data of the database into one or  
more groupings in accordance with the virtual schema and the first input  
indicating the criteria.

However, the Office Action argues, cites Li for:

Li discloses: aggregating data of the database into one or more groupings  
in accordance with the virtual schema and the first input indicating the criteria  
(page 6, paragraphs 100-101, Li).

The Office Action argues that:

Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include aggregating data of the database into one or more groupings in accordance with the virtual schema and the first input indicating the criteria in the system of Pouschine as taught by Li. The motivation being to enable the system structures meta information in difference group schemas (page 6, paragraph 0108, Li).

Applicants disagree.

Amended Claim 1 recites:

1. A method, comprising:  
receiving a first database;  
forming a virtual schema including at least a portion of a dataset included within the first database;  
receiving a first input indicating a criteria;  
aggregating data of the first database into one or more groupings in accordance with the virtual schema and the first input indicating the criteria; and  
displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation.

Even assuming *arguendo* that each and every Office Action assertion were entirely correct (which cannot be), the Office Action's argument fails to consider recited claim limitations. Moreover, Li's system teaches away.

As stated above, Pouschine did not disclose a virtual schema. Li also fails to teach a virtual schema. Accordingly, neither Pouschine nor Li, either alone or in any combination, teach the recited "forming a virtual schema including at least a portion of a dataset included within the first database" of claim 1.

Li teaches away. Li requires a wrapper schema. Li's wrapper schema REQUIRES wrapper data that is not required by the present invention. Therefore, Li teaches away for at least this reason.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Li from further consideration as a reference.

Claims 20 – 22, 25 and 26, while independently patentable, are also patentable for the same reasons described above with respect to Claim 1. In particular, these claims also recite limitations of a “virtual” schema as recited in claim 1. Therefore, based on at least the reasons stated above with respect to Claim 1, the applicant respectfully submits that Claims 20 – 22, 25 and 26 are patentable over Pouschine and Li.

Claims 2 through 4 and 13 through 19 are dependent claims depending directly or indirectly from claim 1. Therefore claims 2 through 4 and 13 through 19 are patentable over Pouschine and Li for at least the same reasons that claim 1 is patentable over Pouschine and Li.

### **Gonzales**

In item 9 that begins on page 9, the Office Action rejected claims 5 - 7 under 35 U.S.C. § 103(a) as being unpatentable over Pouschine in view of Li and further in view of Michael Gonzales “Seeking spatial intelligence,”

<http://intelligententerprise.com/000120/feat1.shtml> (provided by the Applicant).

The Office Action admits that Pouschine and Li did not disclose:

a second input indicating one or more regions [that] comprises: at least one of an input from a user, predetermined area, and derivation based upon one or more objects on an and dimensional presentation and a result of the computation.

The Office Action cites Gonzales, however, for disclosing:

a predetermined area (table 1, page 2, Gonzales).

The Office Action argues that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the step for predetermined area in combination system of Pouschine and Li as taught by Gonzales.

Applicant disagrees.

Since rejected claims claims 5 – 7 depend either directly or indirectly from claim 1, the asserted combination of Pouschine, Li and Gonzales cannot render the embodiments recited by claims claims 5 – 7 obvious if such asserted combination does not render claim 1 obvious.

The failings of Pouschine and Li to teach, suggest or render obvious the claimed embodiments of the present invention under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), as well as that Pouschine requires impermissible hindsight and Li teaches away, have been discussed above with regard to claim 1.

Gonzales fails to remedy the faults of Pouschine and Li with regard to failing to teach, suggest or otherwise render obvious the recited “forming a virtual schema including at least a portion of a dataset included within the first database” of claim 1. Therefore, since claim 5 depends from claim 1 and incorporates each of the recited limitations of claim 1, the asserted combination also fails to render claim 5 obvious for at least the same reasons.

Claims 6 through 7 are dependent claims depending directly or indirectly from claim 5. Therefore claims 6 through 7 are patentable over Pouschine, Li and Gonzales for at least the same reasons that claim 5 is patentable over Pouschine, Li and Gonzales.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Gonzales from further consideration as a reference.

#### **Anderson**

In item 10 that begins on page 10, the Office Action rejected claims 8 - 10 under 35 U.S.C. § 103(a) as being unpatentable over Pouschine in view of Li and further in view of Michael Gonzales “Seeking spatial intelligence,” <http://intelligententerprise.com/000120/feat1.shtml> (provided by the Applicant) and further in view of Anderson et al. “Coordinates of a Killer-Geospatial solutions” (provided by the Applicant). Applicants respectfully traverse.

The Office Action admits that:

Pouschine, Li and Gonzales didn’t disclose: wherein the result of a computation comprises: computing an animal home range, the home range providing a region defined by activities of a target; defining within the region a first ellipse; and defining within the region a second ellipse approximately

orthogonal to the first ellipse; wherein an area defined by intersection of the first ellipse and the second ellipse provides a greatest probability of finding the target.

The Office Action cites Anderson, however, as disclosing:

wherein the result of a computation comprises: computing an animal home range, the home range providing a region defined by activities of a target; defining within the region a first ellipse; and defining within the region a second ellipse approximately orthogonal to the first ellipse; wherein an area defined by intersection of the first ellipse and the second ellipse provides a greatest probability of finding the target (page 3, paragraphs 3-4, Anderson).

The Office Action argues that, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step for computing the activities of a target within the region as claimed in the combination system of Pouschine, Li and Gonzales. Applicants respectfully disagree.

Since rejected claims claims 8 - 10 depend either directly or indirectly from claim 1, the asserted combination of Pouschine, Li, Gonzales and Anderson cannot render the embodiments recited by claims claims 8 - 10 obvious if such asserted combination does not render claim 1 obvious.

The failings of Pouschine, Li, Gonzales and Anderson to teach, suggest or render obvious the claimed embodiments of the present invention under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), as well as that Pouschine requires impermissible hindsight, Li teaches away, and Gonzales fails to teach, suggest or otherwise render obvious at least the recited virtual schema have been discussed above.

Anderson fails to remedy the faults of Pouschine and Li with regard to failing to teach, suggest or otherwise render obvious the recited “forming a virtual schema including at least a portion of a dataset included within the first database” of claim 1. Therefore, since Claims 8 - 10 are dependent claims depending either directly or indirectly from claim 1, claims 8 - 10 are patentable over Pouschine, Li, Gonzales and Anderson for at least the same reasons that claim 1 is patentable over Pouschine, Li, Gonzales and Anderson.



Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Anderson from further consideration as a reference in the instant case.

**Lucas**

In item 11 that begins on page 11, the Office Action rejected claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Pouschine in view of Li and further in view of U.S. Patent Number 6,075,530 to Lucas (Lucas). Applicants respectfully traverse.

The Office Action admits that Pouschine, Li do not disclose:

wherein the n-dimensional presentation comprises a map.

The Office Action cites Lucas as disclosing:

wherein: the n-dimensional presentation comprises a map (fig. 3 and corresponding text, Lucas).

The Office Action argues that, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step for predetermined area in the combination system of Pouschine, Li and Lucas.

Applicants respectfully disagree.

Since rejected claims claims 11 and 12 depend either directly or indirectly from claim 1, the asserted combination of Pouschine, Li, and Lucas cannot render the embodiments recited by claims claims 11 and 12 obvious if such asserted combination does not render claim 1 obvious.

The failings of Pouschine and Li to teach, suggest or render obvious the claimed embodiments of the present invention under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), as well as that Pouschine requires impermissible hindsight, Li teaches away, and both Pouschine and Li fail to teach, suggest or otherwise render obvious at least the recited **virtual** schema have been discussed above.

Lucas fails to remedy the flaws of Pouschine and Li with regard to failing to teach, suggest or otherwise render obvious virtual schema driven information analysis.

Accordingly, Lucas, alone or in any combination with Pouschine and/or Li fails to teach, suggest or otherwise render obvious claim 1.

Claims 11 - 12 are dependent claims depending either directly or indirectly from claim 1. Therefore claims 11 - 12 are patentable over Pouschine, Li, and Lucas for at least the same reasons that claim 1 is patentable over Pouschine, Li, and Lucas.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Lucas from further consideration as a reference in the instant case.

### **Ostroff**

In item 12 that begins on page 12, the Office Action rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Pouschine in view of U.S. Patent Publication Number 20020013782 to Ostroff (Ostroff).

The Office Action states that Pouschine discloses: A computer program product, comprising: code for providing a user interface (col. 14, lines 1-19, Pouschine); code for generating customer data analysis function code (col. 13, lines 3 5-50, Pouschine); code for managing creation of the data warehouse (cot. 14, lines 20-63, Pouschine); code for defining customer data analysis functions (col. 15, lines 29-57, Pouschine); code for performing data source analysis (cot. 15, lines 29-5 7, Pouschine); code for planning operations of a customer data analysis environment (cot. 14, lines 25-3 3, Pouschine); and a computer readable storage medium for holding the codes (20, fig. 6 and corresponding text, Pouschine).

The Office Action admits that Pouschine, Li didn't disclose: code for scheduling tasks for managing a data warehouse; code for pre-processing data for movement into the data warehouse.

The Office Action cites Ostroff discloses: code for scheduling tasks for managing a data warehouse (11, fig. 3 and corresponding text, Ostroff); code for pre-processing data for movement into the data warehouse (18, fig. 3 and corresponding text, Ostroff).

The Office Action argues that, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include code for scheduling tasks for managing a data warehouse and code for pre-processing data for movement into the data warehouse in the combination system of Pouschine as taught by Ostroff.

Applicants respectfully disagrees and would traverse, however, in view of the difference in understanding of the claims between the Office Action and the Applicant,


the Applicant elects instead to cancel claim 24 without prejudice for the present, but reserves the right to pursue such claimed material later.

Because each of the cited references, Pouschine, Li, Gonzales, Anderson, Lucas and Osteroff teach away from the inventions of claims 1 – 23 and 25 - 28, Applicants respectfully request withdrawal of each and every one of these references from further consideration and timely allowance of claims 1 – 23 and 25 - 28 for at least the foregoing reasons.

Respectfully submitted,

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